

(c) *Vehicle ramp or bridge plate*—(1) *Design load*. Ramps or bridge plates 30 inches or longer shall support a load of 600 pounds, placed at the centroid of the ramp or bridge plate distributed over an area of 26 inches, with a safety factor of at least 3 based on the ultimate strength of the material. Ramps or bridge plates shorter than 30 inches shall support a load of 300 pounds.

(2) *Ramp surface*. The ramp or bridge plate surface shall be continuous and slip resistant, shall not have protrusions from the surface greater than $\frac{1}{4}$ inch, shall have a clear width of 30 inches, and shall accommodate both four-wheel and three-wheel mobility aids.

(3) *Ramp threshold*. The transition from roadway or station platform and the transition from vehicle floor to the ramp or bridge plate may be vertical without edge treatment up to $\frac{1}{4}$ inch. Changes in level between $\frac{1}{4}$ inch and $\frac{1}{2}$ inch shall be beveled with a slope no greater than 1:2.

(4) *Ramp barriers*. Each side of the ramp or bridge plate shall have barriers at least 2 inches high to prevent mobility aid wheels from slipping off.

(5) *Slope*. Ramps or bridge plates shall have the least slope practicable. If the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 3 inches or less above the station platform a maximum slope of 1:4 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 6 inches or less, but more than 3 inches, above the station platform a maximum slope of 1:6 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 9 inches or less, but more than 6 inches, above the station platform a maximum slope of 1:8 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is greater than 9 inches above the station platform a slope of 1:12 shall be achieved. Folding or telescoping ramps are permitted provided they meet all structural requirements of this section.

(6) *Attachment*—(i) *Requirement*. When in use for boarding or alighting, the ramp or bridge plate shall be attached to the vehicle, or otherwise prevented

from moving such that it is not subject to displacement when loading or unloading a heavy power mobility aid and that any gaps between vehicle and ramp or bridge plate, and station platform and ramp or bridge plate, shall not exceed $\frac{5}{8}$ inch.

(ii) *Exception*. Ramps or bridge plates which are attached to, and deployed from, station platforms are permitted in lieu of vehicle devices provided they meet the displacement requirements of paragraph (c)(6)(i) of this section.

(7) *Stowage*. A compartment, securement system, or other appropriate method shall be provided to ensure that stowed ramps or bridge plates, including portable ramps or bridges plates stowed in the passenger area, do not impinge on a passenger's wheelchair or mobility aid or pose any hazard to passengers in the event of a sudden stop.

(8) *Handrails*. If provided, handrails shall allow persons with disabilities to grasp them from outside the vehicle while starting to board, and to continue to use them throughout the boarding process, and shall have the top between 30 inches and 38 inches above the ramp surface. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between $1\frac{1}{4}$ inches and $1\frac{1}{2}$ inches or shall provide an equivalent grasping surface, and have "eased" edges with corner radii of not less than $\frac{1}{8}$ inch. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

§ 38.85 Between-car barriers.

Where vehicles operate in a high-platform, level-boarding mode, devices or systems shall be provided to prevent, deter or warn individuals from inadvertently stepping off the platform between cars. Appropriate devices include, but are not limited to, pantograph gates, chains, motion detectors or other suitable devices.

§ 38.87 Public information system.

(a) Each vehicle shall be equipped with an interior public address system